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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,408	02/14/2001	Yasunari Yoshitomi	52437/24	4751

26646 7590 03/26/2003

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EXAMINER

IP, SIKYIN

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 1/8/03
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 4-6 is/are pending in the application.
Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 4-6 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 4-6 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5190597 to Kobayashi et al or USP 4979996 to Kobayashi et al in view of USP 4054471 to Datta (PTO-1449), USP 3969162 to Henke (PTO-1449), or USP 4318758 to Kuroki et al (PTO-1449) and further teaching of USP 4595426 to Iwayama et al.

4. The USP '597 and USP '996 reference(s) disclose(s) the features including the claimed grain oriented steel composition, magnetic flux density and watt loss properties, and method steps such as hot rolling, cold rolling, decarburizing, nitriding, and annealing with MgO separator. The features relied upon described

above can be found in the reference(s) at: USP '597 (abstract and examples 1 and 2) and USP '996 (in figures 1-3, tables, and examples 1-2). The difference between the reference(s) and the claims are as follows: USP '597 and USP '996 do not disclose the claimed final steel thickness, grain size, and shape factor. However, Datta (abstract), Henke (col. 3, lines 35-48 and claim 3), and Kuroki (col. 2, lines 41-44, example 3, figure 7, and claim 1) disclose(s) the claimed steel final thickness and grain size are merely conventional with the processing steps as USP '597 and USP '996 in the same field of endeavor.

5. Iwayama in col. 7, line 13 to col. 8, line 11 disclose the SF less than 0.6 would reduce watt loss (col. 7, lines 46-54) and the crystal grains have a maximum 4° to 5° difference orientation at the grain boundaries for high-magnetic flux density grain-oriented silicon steel sheets. In Figure 2 and col. 4, line 64 to col. 5, line 2, Iwayama discloses a sheet thickness would affect the watt-loss. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to control the shape factor and grain orientation as taught by Iwayama in order to reduce watt-loss and improve magnetic flux density (See col. 7, line 60 to col. 8, line 7). In re Venner, 120 USPQ 193 (CCPA 1958), In re LaVerne, et al., 108 USPQ 335, and In re Aller, et al., 105 USPQ 233.

6. With respect to the coil inside diameter which is considered conventional to

avoid stress and plastic deformation on the coiled strip.

Response to Arguments

7. Applicant's arguments filed January 8, 2003 have been fully considered but they are not persuasive.

8. Applicants' argument with respect to the thickness of the silicon steel sheets of cited references is noted. But, Kuroki discloses thickness not more than 0.5 mm which overlaps the claimed 0.36 to 1.0 mm.

9. Applicants' argue in pages 12-14 of the instant remark that the claimed SF and $\Delta\theta$ are new and novel. But, as is evinced by Iwayama in col. 7, line 12 to col. 8, line 11 that both are known in the art of cited references since 1986 to reduce watt-loss of silicon steel.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.


Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone number for this Art Unit 1742 are (703) 305-3601 (Official Paper only) and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.



SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
March 24, 2003